UNITED NATIONS DEVELOPMENT PROGRAMME

UNDP

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DP/PROJECTS/2844
(IND/72/047)
28 February 1980

ENGLISH ONLY

APPROVAL OF UNDP ASSISTANCE TO A PROJECT OF THE GOVERNMENT OF INDIA

Advanced Technology in Semi-conductor Devices, CEERI, Pilani
(Supplementary Assistance) (IND/72/047)

Report of the Administrator*

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|---|---|
| Date of present approval: | June 1979 |
| Starting date of project activities: | November 1975 (Including previous assistance) |
| Planned completion date: | March 1981 |
| To be executed by: | United Nations Educational, Scientific and Cultural Organization (UNESCO) |
| Government implementing agency: | Council of Scientific and Industrial Research (CSIR) through the Central Electronics Engineering Research Institute, (CEERI), Pilani |
| Estimated cost of assistance planned under present approval: | $ 791 700 |
| Source of UNDP financing: | Indicative Planning Figure (IPF) |

I. Background

1. The Central Electronics Engineering Research Institute (CEERI) is one of the national laboratories of the Council of Scientific and Industrial Research (CSIR). It has pioneered in India the development of silicon planar technology and television components. CEERI works closely with the electronics industry to ensure that the results of its research and development activities are translated into production. It has for example, a large number of collaborative agreements with industry covering a large variety of electronic products, and has licensed processes it developed to industry for production.

2. At present there are about six manufacturers of transistors and diodes. However, none of them produces integrated circuits, the annual demand for which is estimated to triple during the second half of the 1970's. Advancement and capabilities in this high-priority field are highly dependent on research and development. This will result not only in greater manufacturing economy and efficiency, but in saving foreign reserves through import substitution.

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3. Educational television is considered to be a potentially important educational method, especially in the rural areas of India. The Government is assigning high priority to experimentation in this communications medium. At present educational television studio equipment is imported. In order to help achieve the Government's goals for educational television, it is considered necessary to develop an indigenous capability to produce such equipment in India, and in November 1975 UNDP assistance was approved 1/ to assist CEERI in continuing and intensifying its research and development work. The supplementary assistance is needed to cover cost escalation of equipment.

## II. Objectives and activities

4. The supplementary assistance which will extend project operations for twelve months will not affect the project objectives. The objectives remain to: (a) make available to Indian industry the know-how for manufacturing electronic devices such as microwave transistors, integrated circuit modules and microwave diodes, and educational television studio equipment; (b) train Indian nationals in the field of semi-conductor technology; and (c) expand CEERI facilities for research and development of semi-conductor devices and educational television studio systems. The project activities thus far, have progressed towards realizing these objectives.

## III. Inputs

5. A major share of the supplementary assistance now approved is for the purpose of meeting cost escalations on the items of equipment already included in the original project document. When the project was conceived, the costs of the equipment were grossly underestimated. The remaining amount is intended to procure equipment recommended by UNESCO consultants, during a Tripartite Review in November 1979, as well as for development of educational television studios which is one of the long-range objectives of the project.

## IV. Financial data

6. The expenditure components of the planned assistance are as follows:

| | Previously approved | Present approval | Total approved |
|---|---|---|---|
| | $ | $ | $ |
| Personnel | 313 600 | 2 800 | 316 400 |
| Training | 206 000 | 5 400 | 211 400 |
| Equipment | 466 700 | 783 500 | 1 250 200 |
| Miscellaneous | 11 000 | - | 11 000 |
| Total | 997 300 | 791 700 | 1 789 000 |

7. The estimated total value, expressed in US dollars, of inputs provided directly by the Government to the project is $ 843,300 in kind.

1/ DP/PROJECTS/1258.

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## II. Objectives and activities

2. The rapid growth of the modern thermal installations utilizing large units has posed very serious problems of finding suitable planning, design, construction, operation and maintenance personnel for these stations. Since the existing training facilities in the country were considered insufficient, the Government requested UNDP assistance for the training abroad of 41 CEA engineers in the latest technological advances in the various fields related to thermal power development.

## III. Inputs

3. UNDP will provide for the fellowship training of the 41 Indian Engineers in various fields related to thermal power development. The supplementary assistance now approved is to provide additional funds needed to meet the increased training costs of the fellows.

## IV. Financial data

4. The expenditure components of the planned assistance are as follows:

| | Previously approved $ | Present approval $ | Total approved $ |
|---|---|---|---|
| Training | 207 200 | 122 600 | 329 800 |
| Miscellaneous | 2 000 | 1 000 | 3 000 |
| Total | 209 200 | 123 600 | 332 800 |

5. The estimated total value, expressed in US dollars, of inputs provided directly by the Government to the project is $ 25,000 in kind.

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UNITED NATIONS DEVELOPMENT PROGRAMME

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DP/PROJECTS/2846
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ENGLISH ONLY

APPROVAL OF UNDP ASSISTANCE TO A PROJECT OF THE GOVERNMENT OF INDIA

Applied Earth Sciences Research
(Supplementary Assistance) (IND/73/041)

Report of the Administrator*

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|---|---|
| Date of present approval: | May 1979 |
| Starting date of project activities: | September 1977 (Including previous activities) |
| Planned completion date: | August 1981 |
| To be executed by: | United Nations |
| Government implementing agency: | Ministry of Agriculture and Irrigation through the Central Water and Power Research Station (CWPRS), Pune |
| Estimated cost of assistance planned under present approval: | $ 617 400 |
| Source of UNDP financing: | Indicative Planning Figure (IPF) |

## I. Background

1. Development of surface and groundwater resources ranks high in the Government of India's plans for the over-all economic development of the country. The conservation and control of water for irrigation, power and navigation require construction of dams, tunnels, power houses, etc. As convenient sites for dams and other hydraulic structures have already been utilized, greater innovation in structural form is needed to exploit the difficult sites. The structures are subject not only to heavy water pressures, but also to pressures from wind and wave action, temperature changes, shrinkage and earthquakes. The routine methods will be inadequate to design such structures which have complicated profiles and non-uniform and unsymmetrical foundations. The Central Water and Power Station at Pune has therefore embarked on undertaking intensive research in applied earth sciences.

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2. UNDP assistance in undertaking such research was initially approved in September 1977. 1/ Supplementary assistance has now been approved to provide for the cost escalation and freight and insurance expenses of the already approved equipment.

## II. Objectives and activities

3. The immediate objective of the project remains to equip the Central Water and Power Research Station at Pune with the capability to apply the most up-to-date techniques and equipment in its investigations in the field of applied earth sciences by: (a) constructing suitable buildings with special laboratories for vibration studies and tracer techniques: (b) equipping these laboratories with modern facilities both domestic and foreign: and (c) training CWPRS officials in India and abroad in the fields of vibration technology, tracer hydrology, hydrogeology and existing nucleus of disciplines. The major activities to achieve these objectives comprise: (a) an assessment of the present programme of study and planning of the project: (b) recruitment and training of counterpart technical and non-technical personnel and their orientation and initial training: (c) providing a laboratory building: (d) organizing short courses, in-service and fellowship training: (e) providing equipment specifications and procurement: and (f) utilizing international expertise in connection with the development of the Divisions.

## III. Inputs

4. UNDP inputs comprise equipment, 13 fellowships and 22 man-months of consultants in the fields of vibration technology, engineering earth sciences, tracer hydrology and hydrogeology.

## IV. Financial data

5. The expenditure components of the planned assistance are as follows:

| | Previously approved $ | Present approval $ | Total approved $ |
|---|---|---|---|
| Personnel | 185 500 | (2 200) | 183 300 |
| Training | 190 900 | 2 200 | 193 100 |
| Equipment | 502 000 | 617 400 | 1 119 400 |
| Miscellaneous | 10 600 | - | 10 600 |
| Total | 889 000 | 617 400 | 1 506 400 |

6. The estimated value, expressed in US dollars, of inputs to be provided by the Government directly to the project is $ 602,100 in kind.

1/ DP/PROJECTS/1652.

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UNITED NATIONS DEVELOPMENT PROGRAMME

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DP/PROJECTS/2947
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APPROVAL OF UNDP ASSISTANCE TO A PROJECT OF
GOVERNMENT OF INDIA

Extension of Hydraulic Instrumentation Centre
(Supplementary Assistance) (IND/75/020)

Report of the Administrator*

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|---|---|
| Date of present approval: | May 1979 |
| Starting date of project activities: | September 1977 (Including previous activities) |
| Planned completion date: | August 1981 |
| To be executed by: | United Nations |
| Government implementing agency: | Ministry of Agriculture and Irrigation through the Central Water and Power Research Station (CWPRS), Pune |
| Estimated cost of assistance planned under present approval: | $ 612 700 |
| Source of UNDP financing: | Indicative Planning Figure (IPF) |

## I. Background

1. The Central Water and Power Research Station (CWPRS), Pune, is the major organization in India concerned with research in hydraulic engineering and allied fields. As part of an expansion programme it has been receiving assistance from UNDP under the project, Coastal Engineering Research Centre and Development of Hydraulic Instrumentation (IND/71/601) 1/, as well as the present project.2/ The priority areas of research for the station include instrumentation related to flood forecasting, river basin planning, coastline and harbour development, water pollution control, offshore oil exploration, atomic power station cooling and problems of data collection, analysis and storage.

1/ DP/PROJECTS/832 and 1607.

2/ DP/PROJECTS/1654.

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2. Supplementary assistance for the present project has now been approved to provide funds for the cost escalation and freight and insurance of the already approved equipment.

## II. Objectives and activities

3. The immediate objectives of the project remain to strengthen the Hydraulic Instrumentation Centre of the CWPRS and to provide adequate training and equipment to improve knowledge in hydraulic instrumentation and develop new techniques and products. This is to be done by: (a) improving the existing instruments and techniques to yield greater reliability and accuracy; (b) developing, extending and adding new instruments for understanding complicated hydraulic phenomena; (c) strengthening the data transmission, acquisition, reduction and analysis systems; and (d) arranging training for the project personnel engaged in the system design for data acquisition and analysis and allied advanced hydraulic instrumentation.

## III. Inputs

4. UNDP will provide for the services of consultants, 10 fellowships and equipment.

## IV. Financial data

5. The expenditure components of the planned assistance are as follows:

| | Previously approved $ | Present approval $ | Total approved $ |
|---|---|---|---|
| Personnel | 102 000 | - | 102 000 |
| Training | 137 400 | 15 600 | 153 000 |
| Equipment | 684 500 | 597 100 | 1 281 600 |
| Miscellaneous | 12 200 | - | 12 200 |
| Total | 936 100 | 612 700 | 1 548 800 |

6. The estimated value, expressed in US dollars, of the inputs to be provided by the Government directly to the project is $ 527,000 in kind.

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UNITED NATIONS DEVELOPMENT PROGRAMME

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(INS/78/038)
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ENGLISH ONLY

APPROVAL OF UNDP ASSISTANCE TO A PROJECT OF THE GOVERNMENT OF INDONESIA

River Forecasting

(INS/78/038)

Report of the Administrator*

| | |
|---|---|
| Date of present approval: | April 1979 |
| Starting date of project activities: | July 1979 |
| Planned completion date: | July 1981 |
| To be executed by: | World Meteorological Organization (WMO) |
| Government implementing agency: | Institute of Hydraulic Engineering |
| Estimated cost of assistance planned under present approval: | $370 900 |
| Source of UNDP financing: | Indicative Planning Figure (IPF) |

## I. Background

1. Indonesia, with a population of 130 million, ranks as the fifth most populous country in the world. The development of water resources is one of the principal objectives of Indonesia's development. It is only recently that conservation has been attempted for the co-ordinated development and optimum utilization of water resources for raising crops, generating hydro-electric power and reducing flood damage. During the second Five-Year Development Plan (REPELITA II), the development of

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rural areas primarily based on an expansion of agriculture through irrigation has been prominently emphasized.

## II. Objectives and activities

2. In conformity with the objectives of the Third Five-Year Development Plan (REPELITA III) which stresses the important role of the water resources development the project is expected to assist the Institute of Hydraulic Engineering in achieving efficiency and self-reliance in river forecasting, developing forecasting models for single and series on reservoir inflow, and flood forecasting models for rivers. This would provide, through adequate and timely river forecasts, for more efficient reservoir operations and more economical use of water in the operation of storage projects, especially those which are multi-purpose in nature.

3. The immediate objectives of the project are to assist in the reservoir and river forecasting, to be carried out on an experimental basis, by establishing a forecasting model and reporting network to forecast the inflow into the Jatiluhur reservoir; and provide assistance and services to the Government agencies concerned in the operation.

4. A special consideration of the project in addition to the pursuit of its objectives, is the promotion of technical co-operation among developing countries.

## III. Inputs

5. The UNDP contribution to the project will cover the services of an international team of experts and consultants, training, equipment and miscellaneous items.

6. The Government will provide technical support services as well as accommodation, transportation and storage facilities.

## IV. Financial data

7. The expenditure components of the planned assistance are as follows:

| | $ |
|---|---|
| Personnel | 283 400 |
| Training | 31 000 |
| Equipment | 46 500 |
| Miscellaneous | 10 000 |
| | 370 900 |

8. The estimated total value, expressed in U.S. dollars, of inputs provided directly by the Government to the project is $179,200 in kind.

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